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Recognition of *Chyrsobothris thoracica guadeloupensis* Descarpentries,
1981 at the species level (Coleoptera: Buprestidae)

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Recognition of *Chrysobothris thoracica guadeloupensis* Descarpentries, 1981, at the species level (Coleoptera: Buprestidae)

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Abstract. Evidence is presented that the subspecies *Chrysobothris thoracica guadeloupensis* Descarpentries, 1981 (Coleoptera: Buprestidae) should be recognized at the species level. Character evidence is provided to separate *C. guadeloupensis*, **new status**, from *C. thoracica* Fabricius, 1798. Both species are illustrated with habitus photographs and images of the male genitalia.

Introduction

Descarpentries (1981) described *Chrysobothris thoracica guadeloupensis* based on a single male specimen from Guadeloupe, West Indies. At that time, little was known about the nominate form, *C. thoracica* (Fabricius, 1798), other than its original description and subsequent inclusion in Fisher's (1925) revision of the Buprestidae of the West Indies. Fisher recorded *C. thoracica* from the Virgin Islands as well as Puerto Rico.

Descarpentries (1981) provided a description of his new taxon and compared it with a specimen of the nominate *C. thoracica* from St. Thomas, Virgin Islands. We presume the specimen was a female, because Descarpentries provided a habitus illustration of the St. Thomas specimen but did not illustrate the male genitalia as he did for *C. t. guadeloupensis*.

We have compared series of *C. thoracica* and *C. thoracica guadeloupensis* and have found some differences both in external features and the male genitalia. We have also examined an apparently undescribed Dominican Republic species that is similar and are aware of other undescribed species discovered on Montserrat and Saba (Michael Ivie, pers. comm.). It is clear that there is a group of species similar to *C. thoracica*, and based on the differences we have seen, the Guadeloupe taxon should be recognized at the species level, as *Chrysobothris guadeloupensis* Descarpentries, **new status**. Below we give a brief treatment of *C. thoracica* and *C. guadeloupensis* with a short diagnostic description of each that outlines characters by which they differ and provide illustrations of the two species.

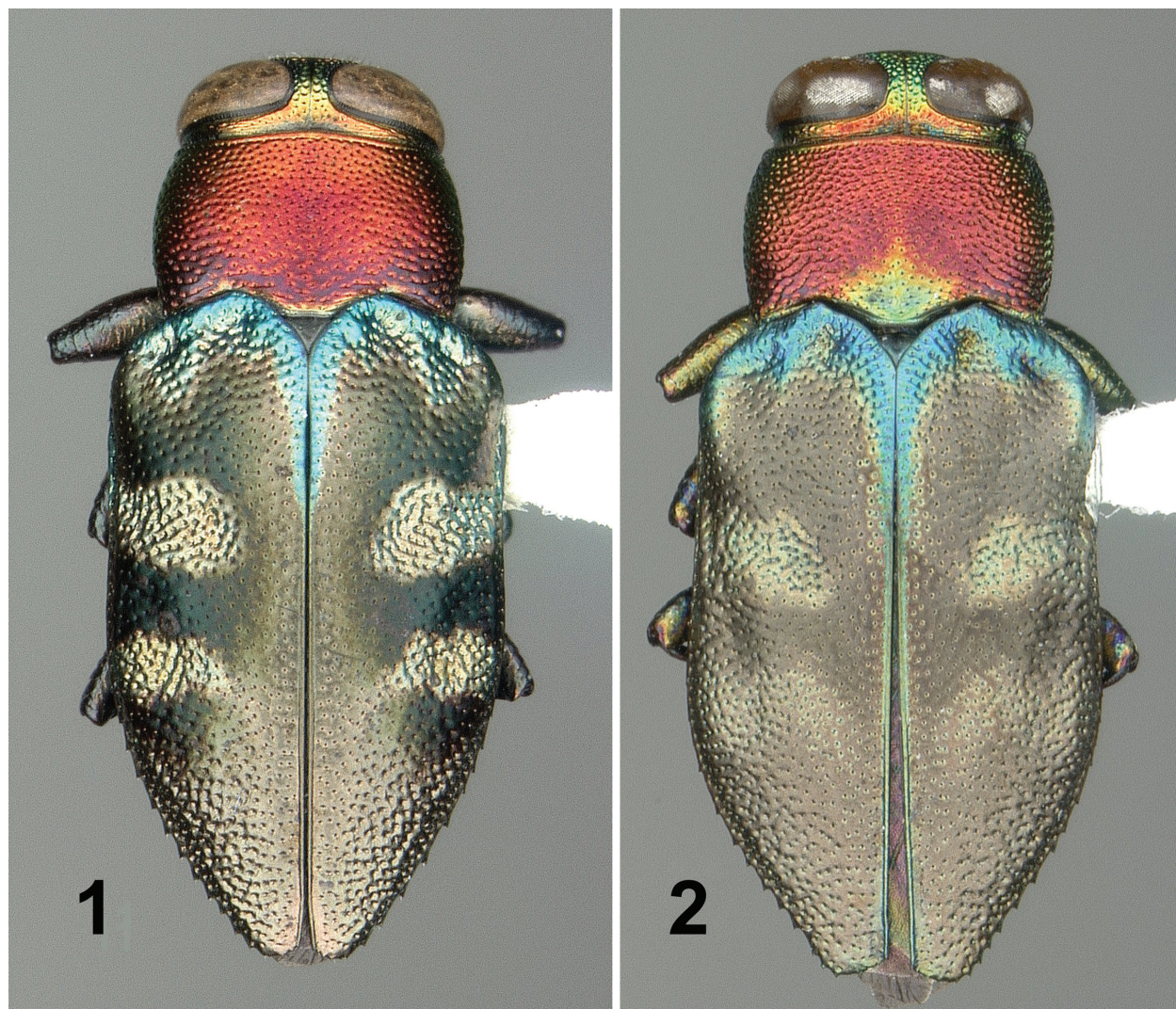
Specimens examined in this study are from the Entomology Department, National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM) and the Norman E. Woodley Collection, North Potomac, Maryland (NEWC).

Chrysobothris thoracica (Fabricius)

Fig. 1, 3, 4

Buprestis thoracica Fabricius, 1798: 138. For more complete synonymy see Bellamy (2008: 1687).

Diagnosis. Male. Frons golden bronze with very narrow margins along eyes metallic green, densely punctate with punctures greenish internally, contrasting with bright metallic green vertex; ventrally curved whitish hairs present over entire frons; first three antennomeres bronzy. Pronotum entirely metallic reddish, at most extremely narrowly greenish along posterior margin. Front tibia with small, tooth-like process on posterior face just distal to middle. Elytra (Fig. 1) with foveae weakly but somewhat



Figures 1–2. Dorsal habitus of *Chrysobothris* species. 1) *C. thoracica* female from Guánica, Puerto Rico. 2) *C. guadeloupensis* male from Gourbeyre, Guadeloupe.

distinctly impressed; green coloration at elytral base extends posteriorly along lateral margin to first fovea; apices of elytra without greenish coloration. Male genitalia (Fig. 3, 4) with parameres slender and evenly tapered posteriorly, weakly arcuate in ventral view (Fig. 4); aedeagus evenly tapered to a sharp apex posteriorly that is slightly curved dorsally. Length 4.5–5.7 mm.

Female. Frons generally slightly duller but not much different in color than male. Front tibia without tooth-like process. Length 5.0–6.1 mm.

Specimens examined. PUERTO RICO: 1 male, Guánica, 15 April 1914, G. B. Merrill (USNM); 1 female, Guánica, Borinquen Forest Reserve, 11 September 1934, R. G. Oakley, dying branch (USNM); 1 female, Santa Rita, July 1913, E. G. Smyth (USNM); 1 male, 1 female, Guánica State Forest, Balena trail, 17°57'41"N, 66°51'44"W, 30 meters, 14 June 2002, N. E. Woodley, on Leguminosae: Mimosoideae shrub (NEWC); 1 male, Guánica State Forest, 17°57.180'N, 66°50.915'W, 1 meter, 27 June 2008, Konstantinov & Chamorro (NEWC); 1 male, Municipio de Ponce, Tuque (behind Holiday Inn), 17°58'42"N, 66°40'21"W, 70–80 meters, 20 June 2002, N. E. Woodley (NEWC); 1 male, Susúa State Forest, 18°04.274'N, 66°54.505'W, 173 meters, 2 July 2008, Konstantinov & Chamorro (NEWC); 1 male, Cabo Rojo, 17°56.044'N, 67°11.727'W, 1 meter, A. S. Konstantinov (NEWC); 1 male, Laguna Cartagena,



Figures 3–6. Male genitalia of *Chrysobothris* species. **3)** *C. thoracica* from Guánica, Puerto Rico, dorsal view. **4)** Same specimen, ventral view. **5)** *C. guadeloupensis* from Gourbeyre, Guadeloupe, dorsal view. **6)** Same specimen, ventral view.

18°00.663'N, 67°01.185'W, 8 meters, A. S. Konstantinov (NEWC). BRITISH VIRGIN ISLANDS: 2 females, Guana Island, 0-80 meters, 1-14 July 1984, S. E. & P. M. Miller (USNM); 1 female, same data but 5-23 July 1985 (USNM); 1 male, same data but 20-24 July 1985 (USNM); 1 male same data but 9-23 July 1987 (USNM). U. S. VIRGIN ISLANDS: 1 male, St. Croix, Frederiksted, Lagoon Street, 25 January 1977, J. Yntema, in office (USNM).

Biology. One of us (NEW) collected *C. thoracica* on a Fabaceae (subfamily Mimosoideae) shrub in Puerto Rico, and observed numerous other individuals, uncaptured, on this plant that is a likely larval host. Ivie and Miller (1984) reported collecting this species on *Croton* sp. (Euphorbiaceae) and white mangrove, *Laguncularia racemosa* (L.) C.F. Gaertn. (Combretaceae), in the Virgin Islands.

Remarks. Male specimens from Guana Island have the frons with a more greenish shade, and both sexes from that island have the elytral foveae brighter green than specimens from Puerto Rico.

***Chrysobothris guadeloupensis* Descarpentries, new status**

Fig. 2, 5, 6

Chrysobothris thoracica guadeloupensis Descarpentries, 1981: 181.

Diagnosis. Male. Frons bright metallic green, densely punctate, concolorous with vertex; ventrally curved whitish hairs present on lower one-third to one-half of frons; first three antennomeres bright

metallic green. Pronotum metallic reddish with a distinct green spot just anterior of the scutellum. Front tibia slightly widened distally just beyond middle, without tooth-like process. Elytra (Fig. 2) with the anterior foveae weakly impressed, posterior pair indicated by color but not impressed; green coloration at elytral base does not extend along lateral margin to first fovea; extreme apices of elytra with greenish coloration. Male genitalia (Fig. 5, 6) with parameres more robust than in *C. thoracica* and slightly more arcuate in ventral view (Fig. 6); aedeagus nearly parallel-sided just before apex, slightly curved dorsally. Length 4.5–5.5 mm.

Female. Frons bright golden orange, significantly differing in color from male. Front tibia as in male. Length 5.3–6.2 mm.

Specimens examined. [Note: Geographic coordinates were taken from maps and internet sources, not direct GPS readings] GUADELOUPE: **Basse-Terre:** 1 male, 2 females, Gourbeyre, 15°59'N, 61°41'W, 2 October 2003, J. Touroult, ex larva in *Acacia* sp. (NEWC); 1 male, 1 female, Gourbeyre, Mont Caraïbes, 15°58'N, 61°41'W, 20 September 2003, J. Touroult (NEWC); 2 males, Gourbeyre, Mont Caraïbes, 15°58'N, 61°41'W, 28 August 2003, J. Touroult, ex larva in *Acacia tortuosa* (L.) Willd. (NEWC); 2 females, Petit Bourg, Duclos, 16°11'N, 61°35'W, 7 November 2003, J. Touroult (NEWC). **Grand-Terre:** 1 male, Anse Bertrand, Barre de Cadoue, 16°28'N, 61°30'W, 18 February 2004, J. Touroult (NEWC); 1 female, Les Abymes, Pont de l'Alliance, 16°16'N, 61°30'W, 20 April 2003, J. Touroult (NEWC); 1 female, Petit-Canal, forêt de Deville, 16°23'N, 61°29'W, 19 February 2003, J. Touroult (NEWC).

Biology. Touroult (2005) recorded *Chrysobothris guadeloupensis* from tamarind, *Tamarindus indica* L. (Fabaceae); white mangrove, *Laguncularia racemosa*; and *Acacia tortuosa* (L.) Willd. (Fabaceae). Adults were reared from larvae in these three host plants from small diameter branches (2–5 cm). Touroult (2005) stated that the species was widespread in Guadeloupe, principally in the xerophilic zone and sporadically in the mesophilic zone.

Remarks. Touroult (2005) provided some additional locality records for *C. guadeloupensis* from Guadeloupe, and recorded it from the nearby island of La Désirade.

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